Exam Practice
Sample Assessment

Sharebrook Estate and Safari Park

Task Scenario

‘Sharebrook Estate and Safari Park’ has partially developed a database that will eventually merge with the database you created in **Part A**.

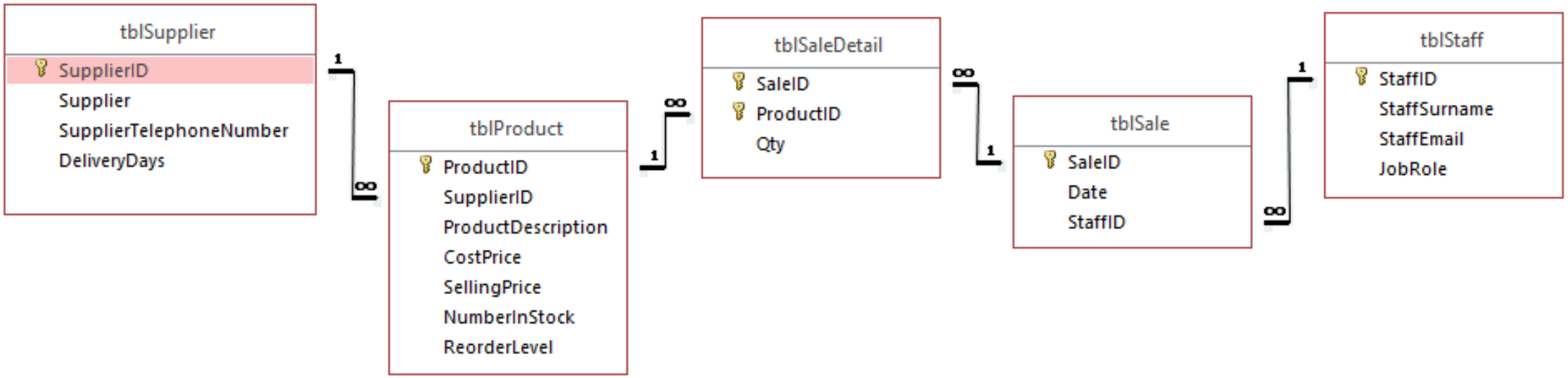
The estate has a gift shop.

- The gift shop sells products that are purchased from suppliers.
- Suppliers can take from 1 to 5 days to deliver products.

The gift shop managers must make sure they keep information about the products in stock up-to-date when deliveries are made.

The database will record information about the suppliers and products.

Tables and Relationships



Note

- The structure of the tables provided should not be changed in any way e.g. do not add validation, do not change data types.
- You will **only** be required to use tblSupplier and tblProduct.

Activity 6: Forms (1 hour 10 minutes) – 14 marks

(a) Create an efficient interface that will facilitate database input by producing:

(i) an input form to add a supplier.

- The form should be ready for data entry.
- The supplier’s name, telephone number and number of days for delivery must be present.
- The number of days for delivery must be within the specified range.
- Valid data should be appended to the supplier table and a save message displayed.
- A suitable error message should appear where invalid data has been used.

(a) Create an efficient interface that will facilitate database input by producing:

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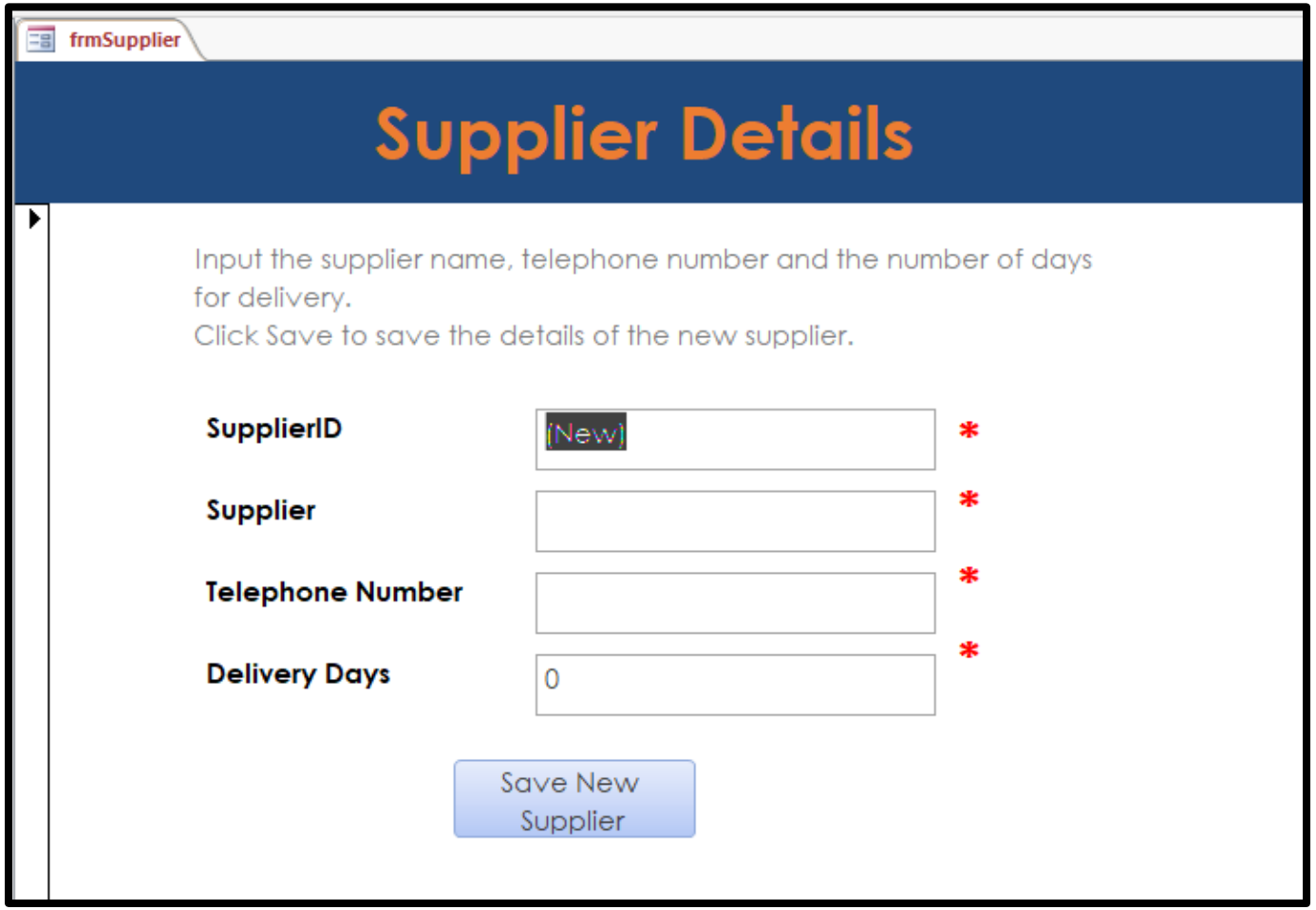
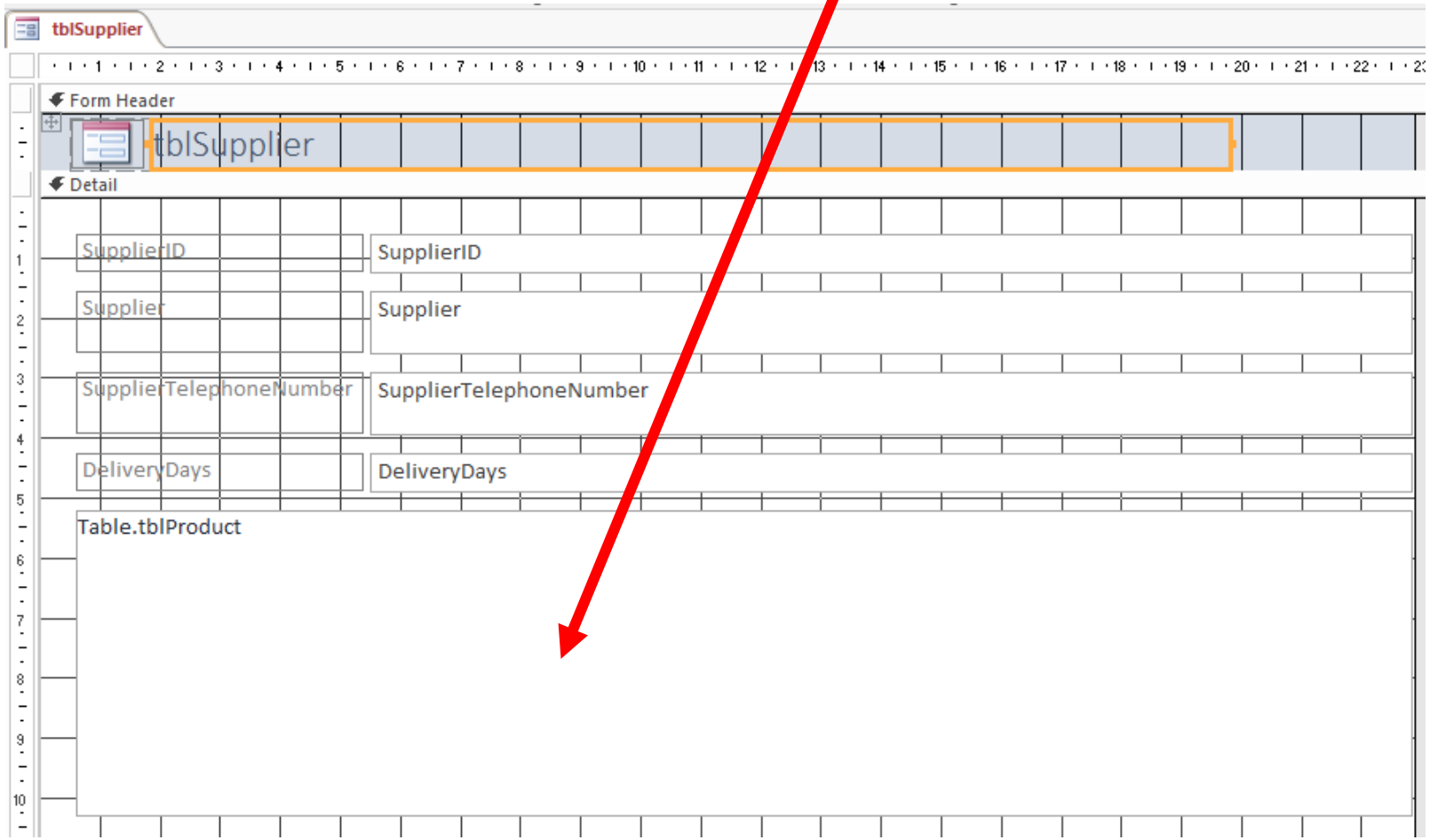


This is what the finished input form will look like – see the 'How To' guide on the following slides:

How to create a Supplier Form

- Highlight (in pink) the table ‘tblSupplier’ (do not open)
- Go to ‘Create’ and ‘Form’.
- This will automatically generate a form that the software thinks you want. You will adjust it to look exactly as the exam question asks
- Go into ‘Design View’ and delete the Products table that has been automatically generated (you don’t need this)
- Make the Form look user

Delete the Products table that Access automatically generated (it had a guess that you would want this). The exam question said ‘The supplier’s name, telephone number and number of days for delivery must be present’.



Choose a colour theme

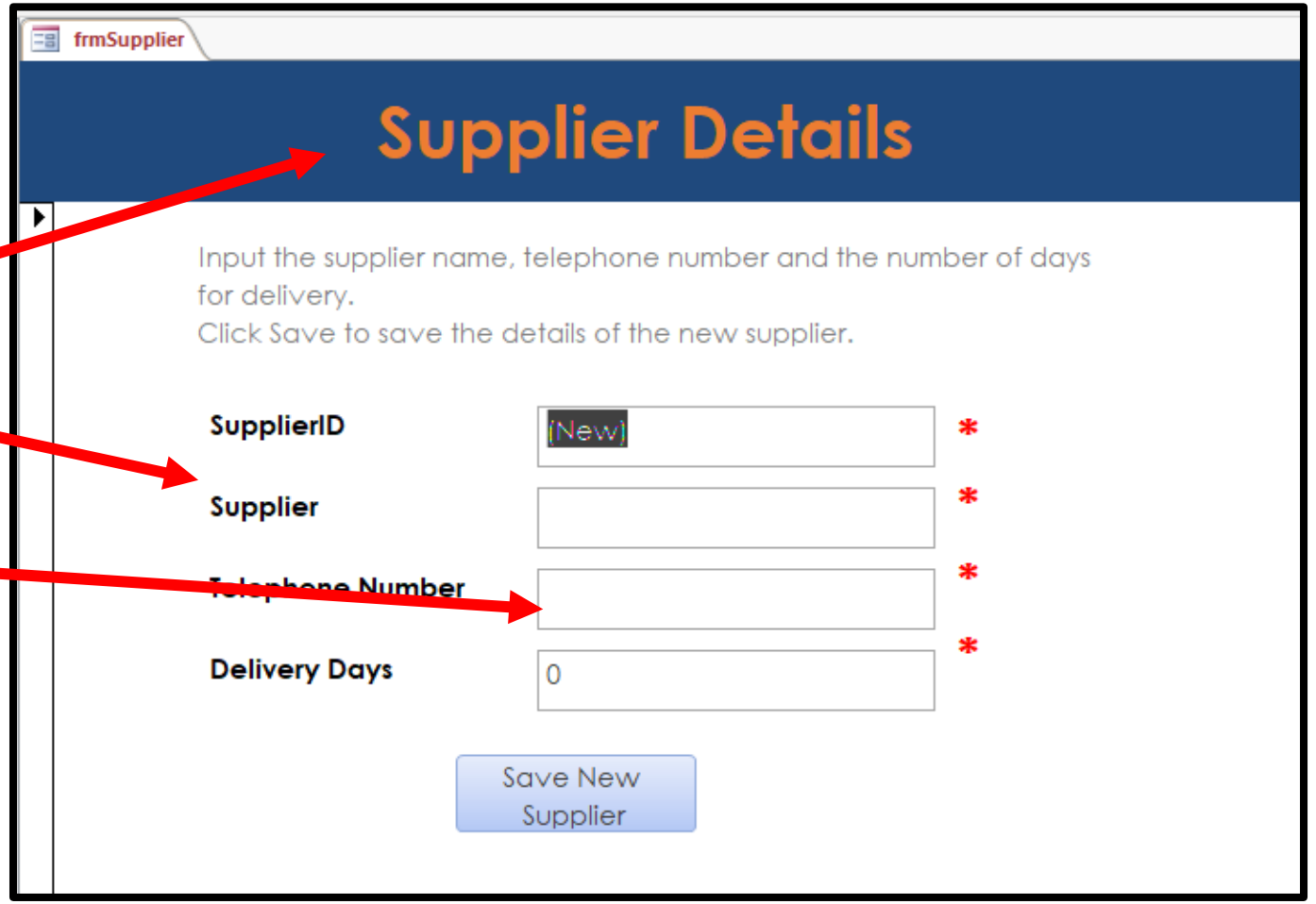
Adjust the form heading to something sensible

Adjust ‘labels’ where appropriate (e.g. put a space between words if not already there)

Line up text boxes

Add asterisks – these indicate required fields (the exam question says ‘The supplier’s name, telephone number and number of days for delivery must be present’

Don’t worry about the ‘Save New Supplier’ button right now.



Creating a macro to open the form to a blank record

The question says the ‘form should be ready for data entry’.

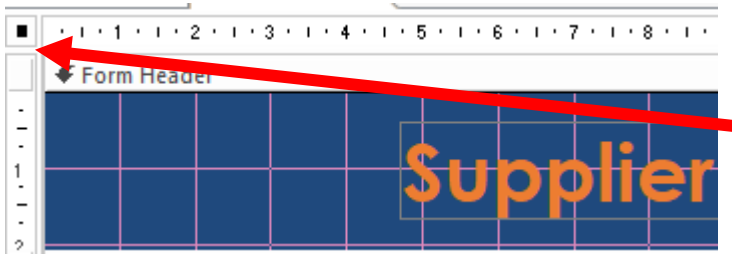
If you open it currently you will see that it shows records of data that is already in the database.

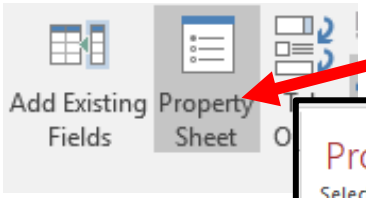
We want it to open to a blank record ready to enter data

We will use a ‘macro’ to do this.

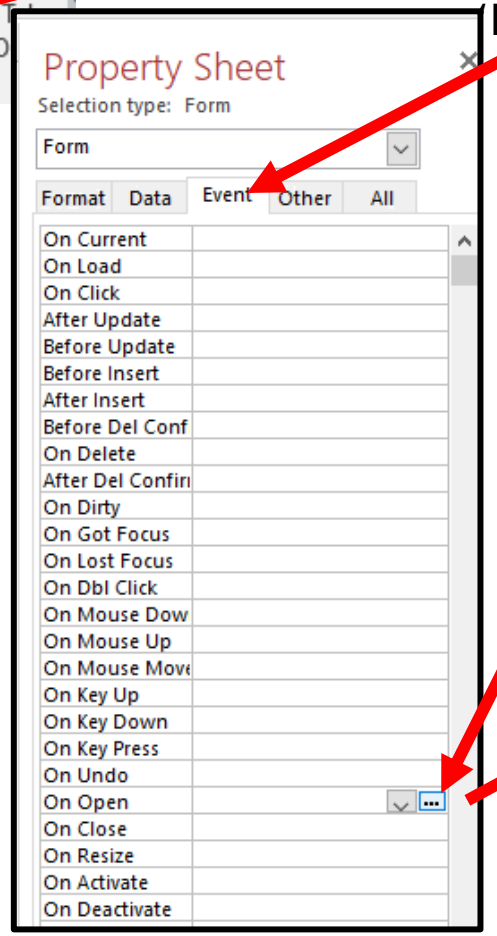
A macro is a little bit of code
that allows you to automate a task or series of tasks

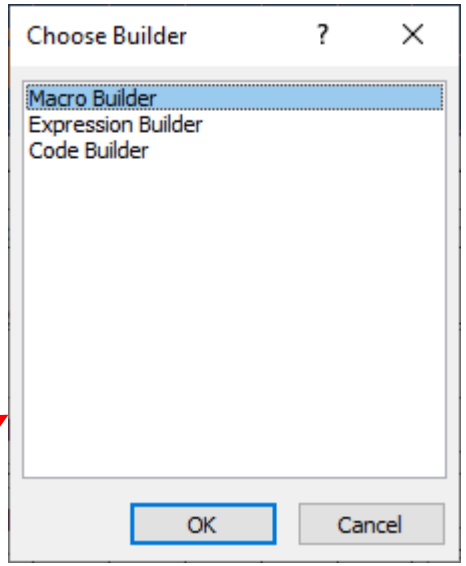
The form should be ready for data entry.





- In Design view, make sure the whole form is selected (click the dot in the top left corner)
- Show the Property Sheet (in ‘Design’)
- Click on the ‘Event’ tab and find ‘On Open’ - click the 3 dots and choose (Macro Builder





Continued on next slide

Creating a macro to open the form to a blank record

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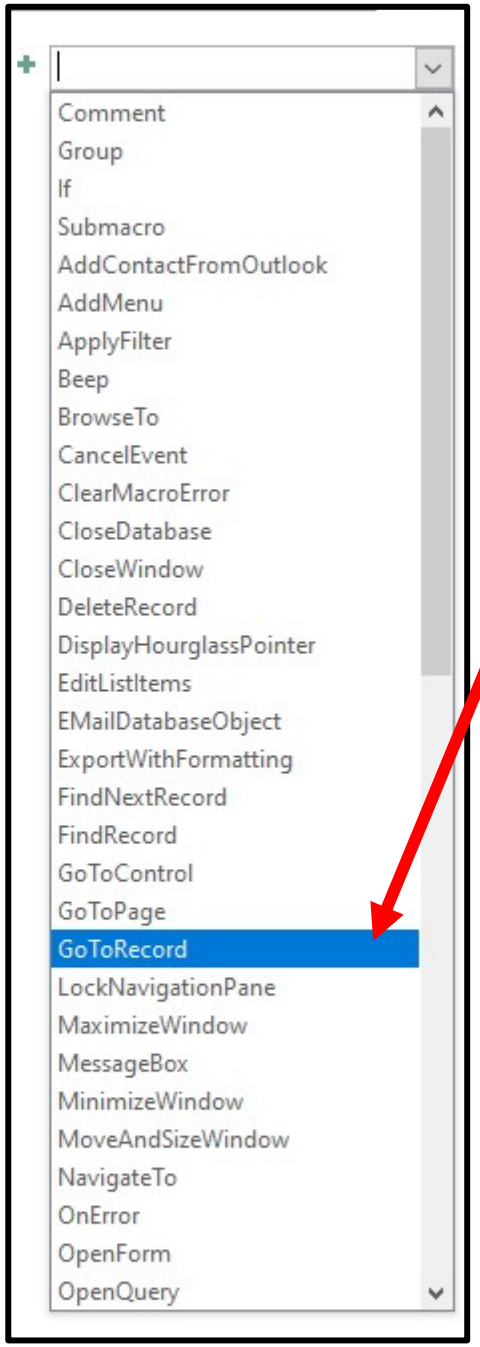
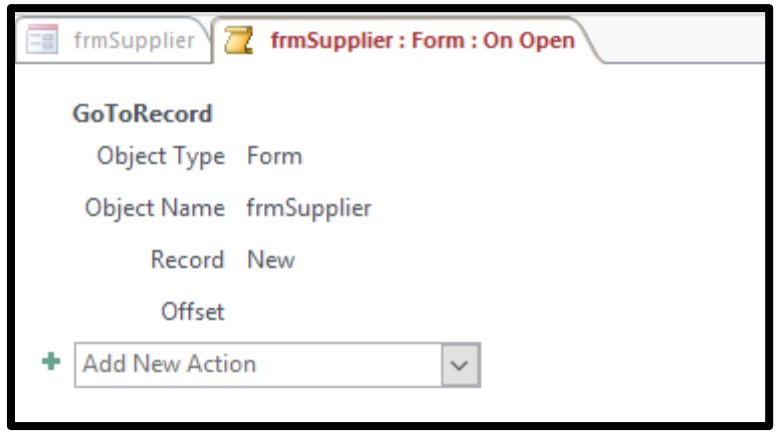


- From the 'Add New Action' drop down, choose 'GoToRecord'.
- Choose options as in the screen capture below. You are specifying that the form should open to a new record.



- Close the form and re-open – it should open to a new record ready for data entry
- Remember that before you did this it opened with data already showing

Activity 6: Forms (1 hour 10 minutes) – 14 marks

(a) Create an efficient interface that will facilitate database input by producing:

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- The form should be ready for data entry.
- The supplier’s name, telephone number and number of days for delivery must be present.
- The number of days for delivery must be within the specified range.
- Valid data should be appended to the supplier table and a save message displayed.
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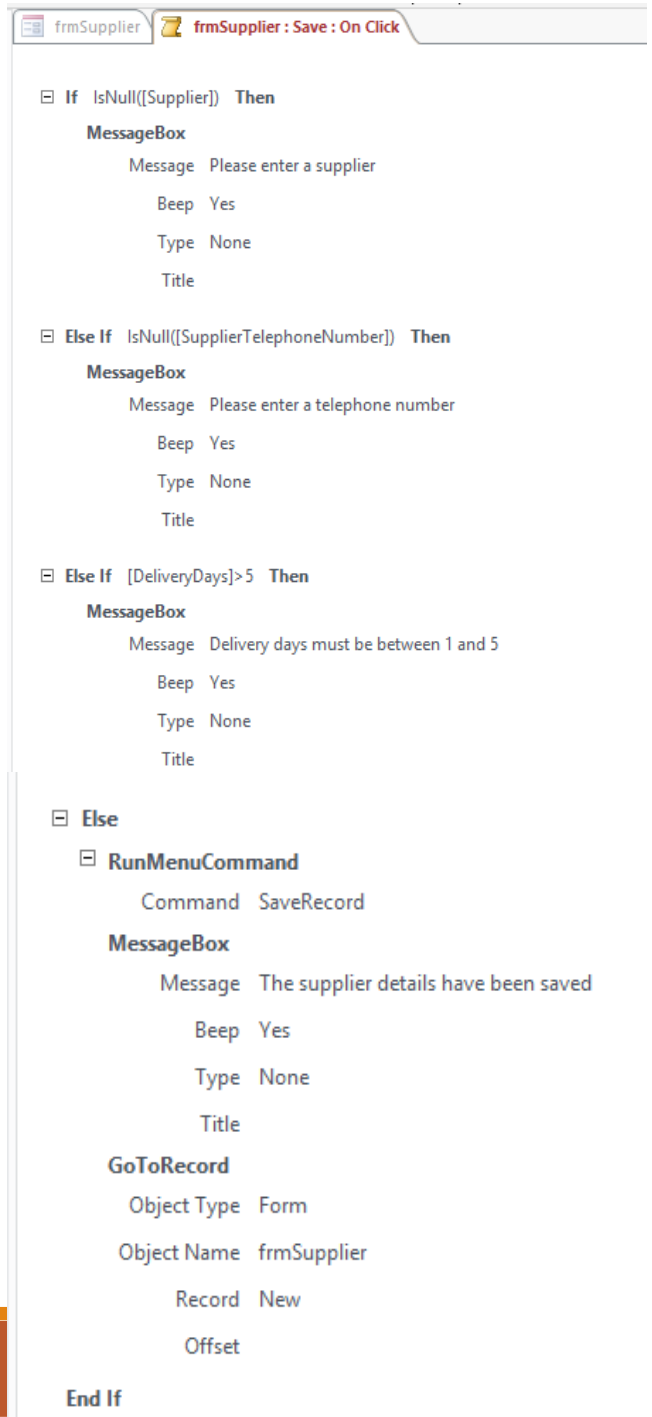
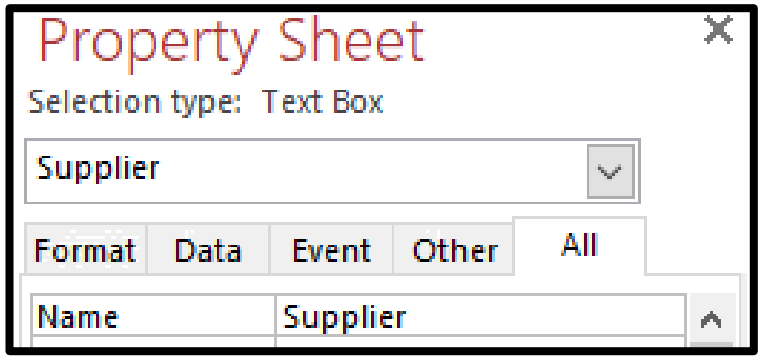


Macro to add validation and messages

‘How To’ – before you start ……..

- If you look closely at the macro (zoom in) you will notice that it has field names in brackets in the code
- This is referring to the name of text boxes
- Name each of the text boxes (not the labels) on your form properly so that you can refer to them in the macro



frmSupplier | frmSupplier : Save : On Click

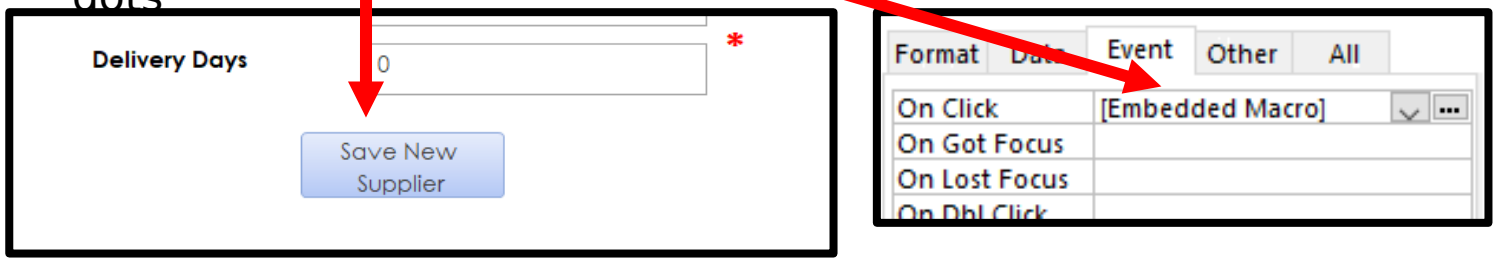
```
If IsNull([Supplier]) Then
    MessageBox
        Message  Please enter a supplier
        Beep  Yes
        Type  None
        Title
Else If IsNull([SupplierTelephoneNumber]) Then
    MessageBox
        Message  Please enter a telephone number
        Beep  Yes
        Type  None
        Title
Else If [DeliveryDays]>5 Then
    MessageBox
        Message  Delivery days must be between 1 and 5
        Beep  Yes
        Type  None
        Title
Else
    RunMenuCommand
        Command  SaveRecord
    MessageBox
        Message  The supplier details have been saved
        Beep  Yes
        Type  None
        Title
    GoToRecord
        Object Type  Form
        Object Name  frmSupplier
        Record  New
        Offset
End If
```

Macro to add validation and messages

This is a more complex macro that brings together several tasks. In this example the tasks are validation checks and messages to the user. Each ‘task’ or ‘instruction’ will be carried out in the order they are written.

How to:

- Add a button to the form ‘Save New Supplier’ – cancel the wizard that appears
- Build a macro in the ‘On Click’ property (in Event) – click the 3 dots



See the next slide

frmSupplier | frmSupplier : Save : On Click

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If IsNull([Supplier]) Then
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        Type  None
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    MessageBox
        Message  Delivery days must be between 1 and 5
        Beep  Yes
        Type  None
        Title
Else
    RunMenuCommand
        Command  SaveRecord
    MessageBox
        Message  The supplier details have been saved
        Beep  Yes
        Type  None
        Title
    GoToRecord
        Object Type  Form
        Object Name  frmSupplier
        Record  New
        Offset
End If
```

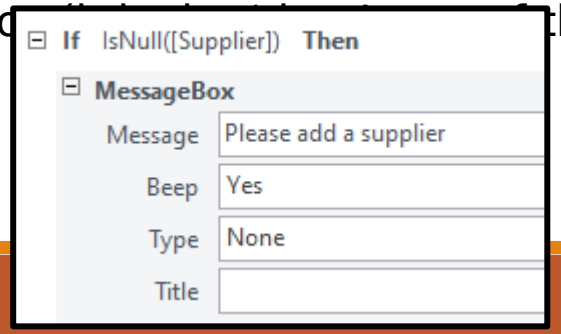
Macro to add validation and messages

How to:

- We will start with an ‘IF’ statement. Choose ‘IF’ from the Action list.

- We want to build an IF statement - start typing ‘IsNull’ and select it from the list that appears. It will then go into the ‘Conditional expression’ box with an open bracket.
- Type ‘Supplier’ in square brackets (this is what you named the text box) and then close the round bracket.

- This statement is saying ‘If the supplier text box is blank’. We now need to give an instruction on what should happen if the supplier text box is left blank. It will be a message bo the statement).
- From ‘Add New Action’ choose ‘MessageBox’ and type a message

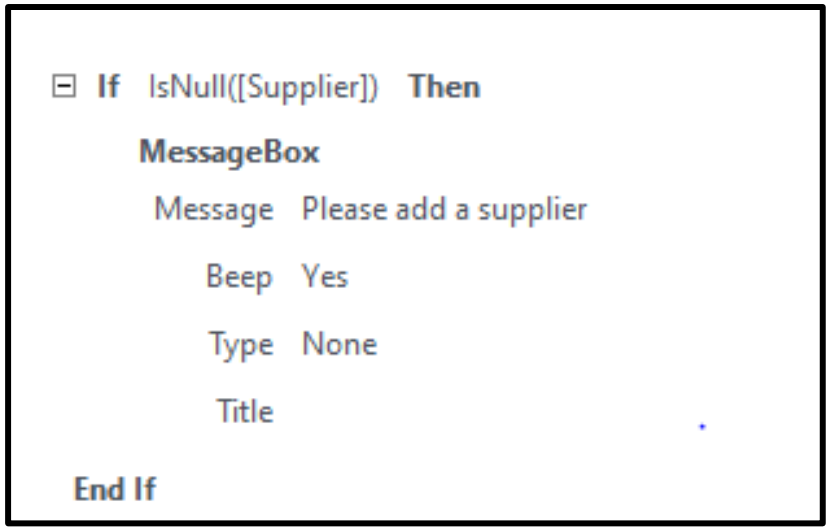


See the next slide

Macro to add validation and messages

How to:

- The first part of your macro is now complete
- It is saying: '**If** the supplier text box is blank (IsNull) **Then** return a message 'Please add a supplier'.
- We want to add further actions to this macro. While you are clicked in the last action that you did (MessageBox) choose **'Add Else If'**



- This allows us to create another IF statement before the final 'End If'
- Build the macro from here using the 'Else If' function as many times as you need to – before the final 'End If'. Examine the syntax on slide 12 or 13 (zoom in).
- Test the macro by clicking the 'Save' button that the macro is attached to as you fill in the form.

Activity 6: Forms (1 hour 10 minutes) – 14 marks

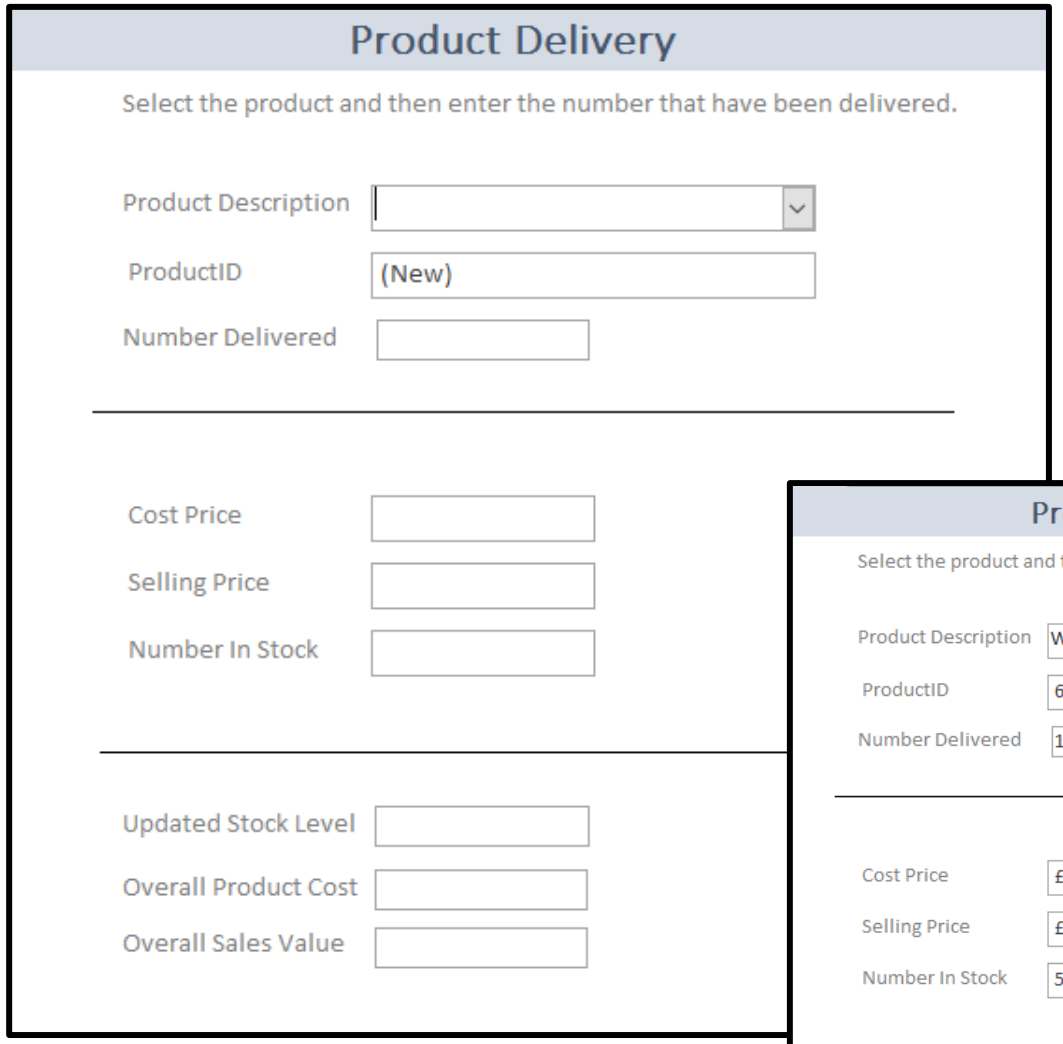
(ii) Input form to add product deliveries.

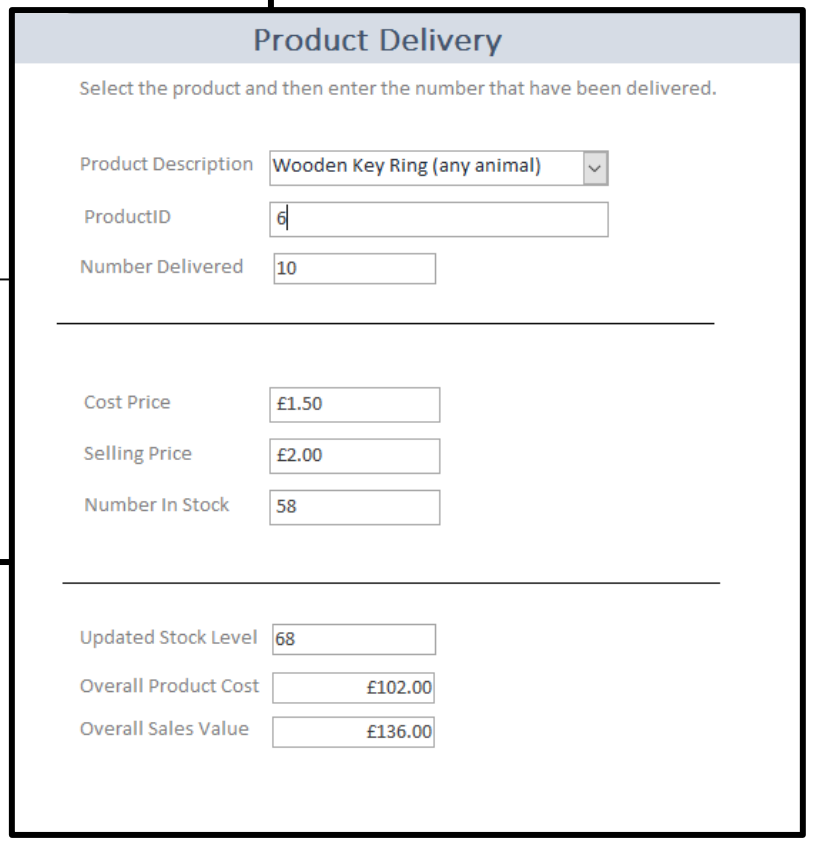
The form should not include validation for any fields.
The form should not include an automated routine to save the data

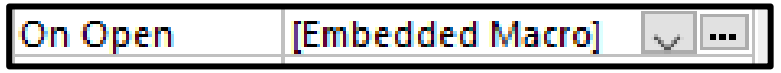
- The user should be able to select the product and input the number that has been delivered.
- These details should then be displayed:
  - The cost price for the product
  - The selling price for the product
  - The current number in stock.
- These details should then be calculated and displayed:
  - The new number in stock
  - The overall cost for the products
  - The overall sales value.

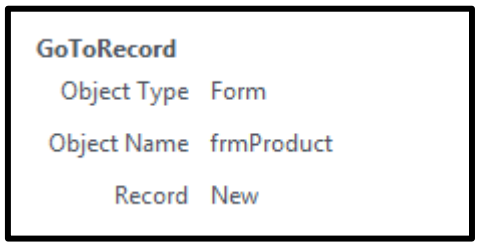
Activity 6: Forms

ii) Add Product Deliveries



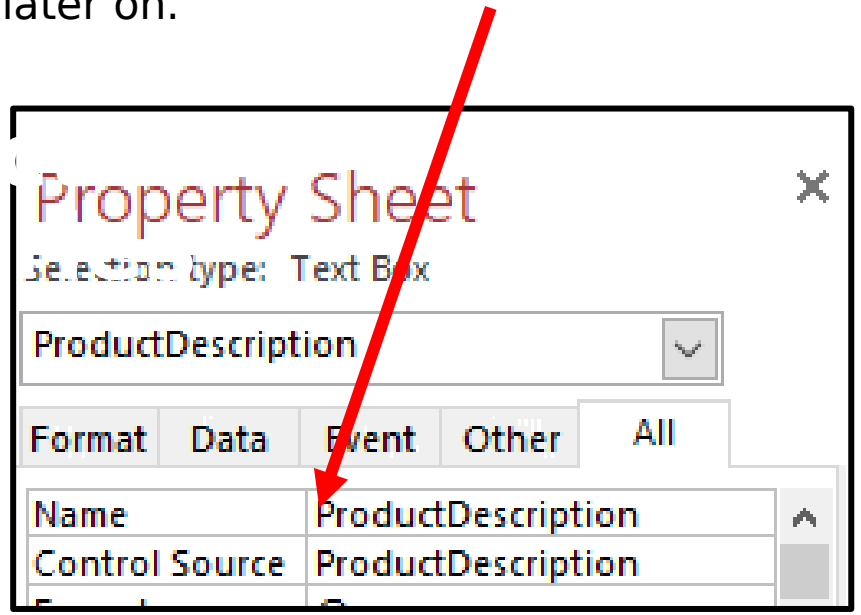


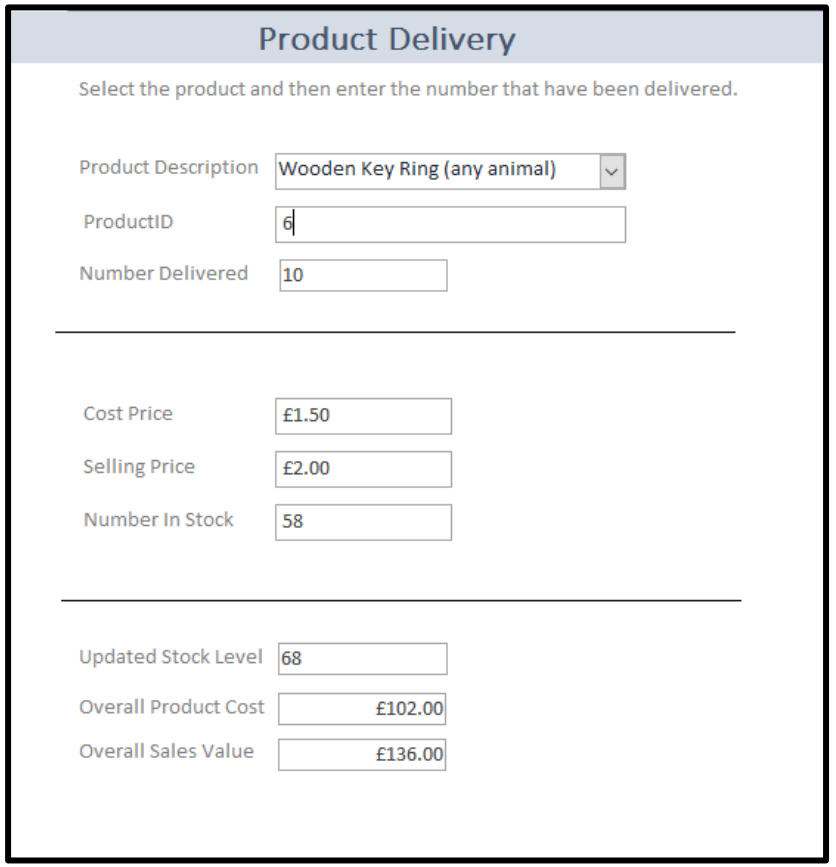




‘How to’:

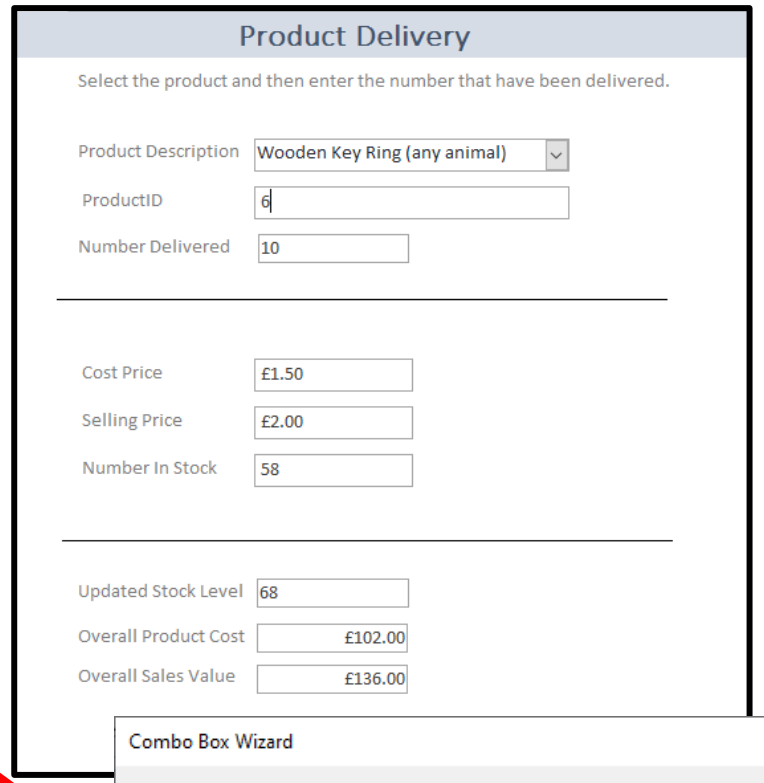
- Select tblProduct and then choose ‘Create’ and ‘Form’
- You will automatically get the ‘tblSaleDetail’ on the form – delete it in Design View.
- Note that some of the text boxes shown on the right are not present – we will add those later.
- Name all of the text boxes – you will need to use the names in formulas later on.

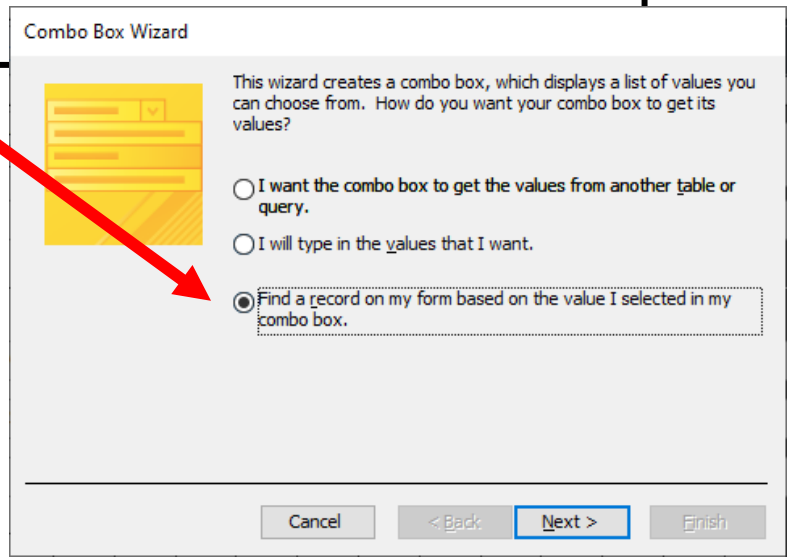




‘How to’ (continued):

- You want to create a drop down list for ‘Product Description’ that fills in the rest of the form automatically.
  - Choose ‘Design’, ‘Combo Box’ and in the wizard choose ‘Find a record on my form based on the value I selected in my combo box’ then next.
  - Choose ‘ProductID’ and ‘Product Description’ then next
  - Unhide the key column and adjust the column width so that all text shows then finish.




Combo Box Wizard
This wizard creates a combo box, which displays a list of values you can choose from. How do you want your combo box to get its values?
I want the combo box to get the values from another table or query.
I will type in the values that I want.
Find a record on my form based on the value I selected in my combo box.
Cancel
< Back
Next >
Finish

- Move the combo box to the top of the form and delete the Product Description text box and label (otherwise you will have it twice).

- Test to make sure it works. It should populate the other fields.

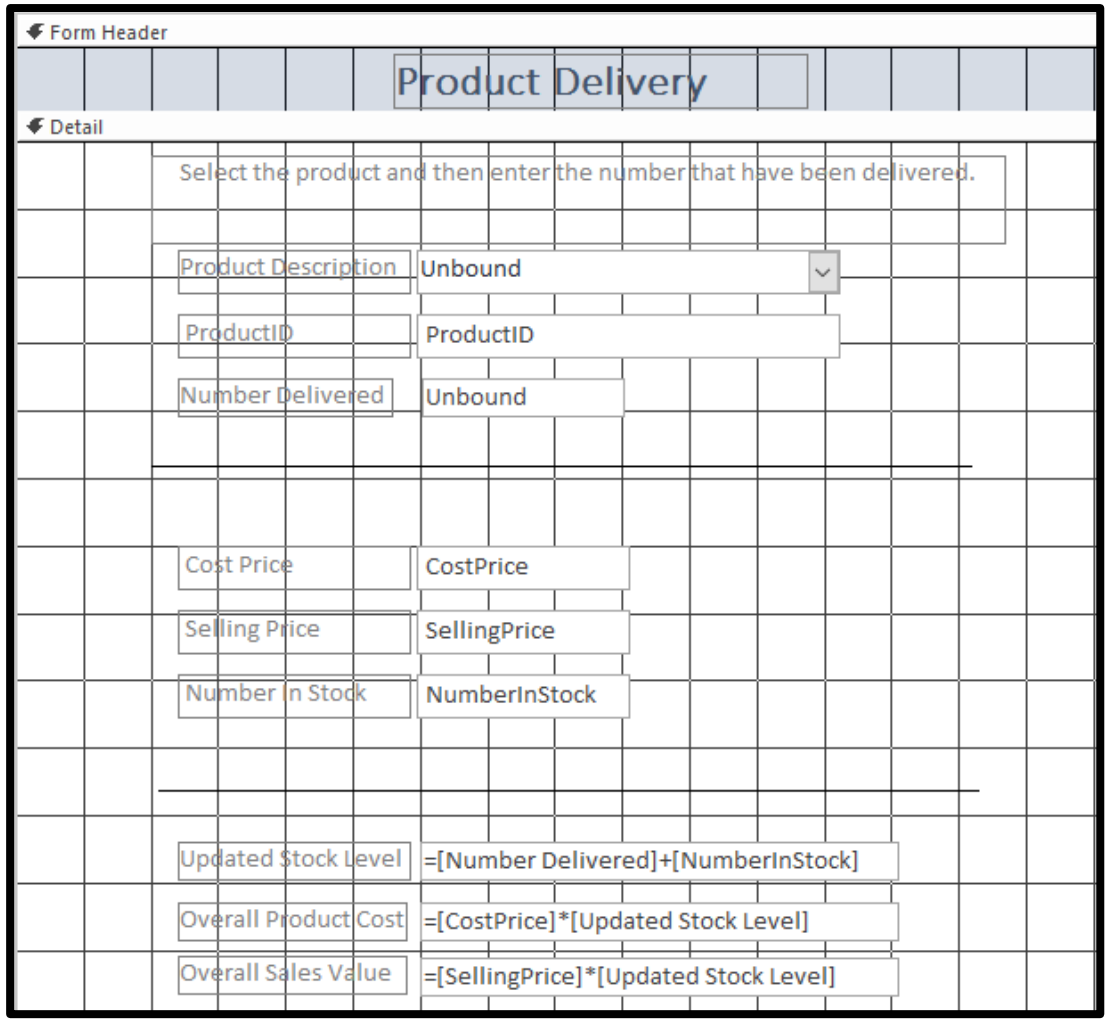
‘How to’ (continued):

- You will see 4 text boxes that you have to add yourself
  - Number delivered (unbound – you will type a value in)
  - Updated Stock Level (a calculation must be added)
  - Overall Product Cost (a calculation must be added)
  - Overall Sales Value (a calculation must be added)

- Start with ‘Number Delivered’ text box – you will find a text box in ‘Design’. Note that when you drag a text box on the form it gives you a label too. Type suitable text into the label (e.g. ‘Number Delivered’

- See the next slide for the 3 text boxes at the bottom with formulas for calculations

- **Make sure you have named all the text boxes first – you are using these names in the formulas**

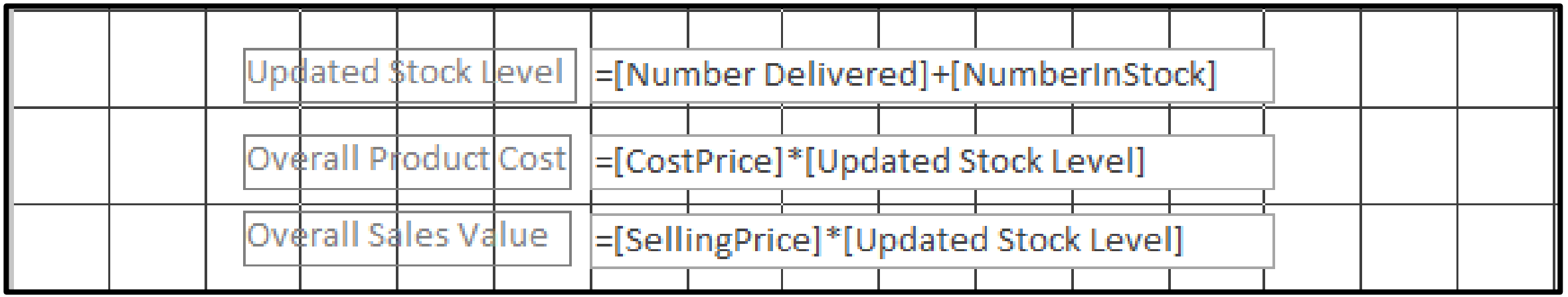


Steps (continued):

- Add text boxes for:
  - Updated Stock Level (a calculation must be added)
  - Overall Product Cost (a calculation must be added)
  - Overall Sales Value (a calculation must be added)

- You can type the formula straight into the text box as shown. Or you can type it in the 'Control Source Property for each field. Or you can 'build' it using the 3 dots (this involves selecting the relevant fields and separating with a + or a * - it saves you having to remember the syntax).

- Test that everything on the form works (e.g. enter a number in the 'Number Delivered' text box.



Steps (continued):

- Format the form so that it is user friendly and presentable

Check that the form does all that is required:

- The user should be able to select the product and input the number that has been delivered.
- These details should then be displayed:
  - The cost price for the product
  - The selling price for the product
  - The current number in stock.
- These details should then be calculated and displayed:
  - The new number in stock
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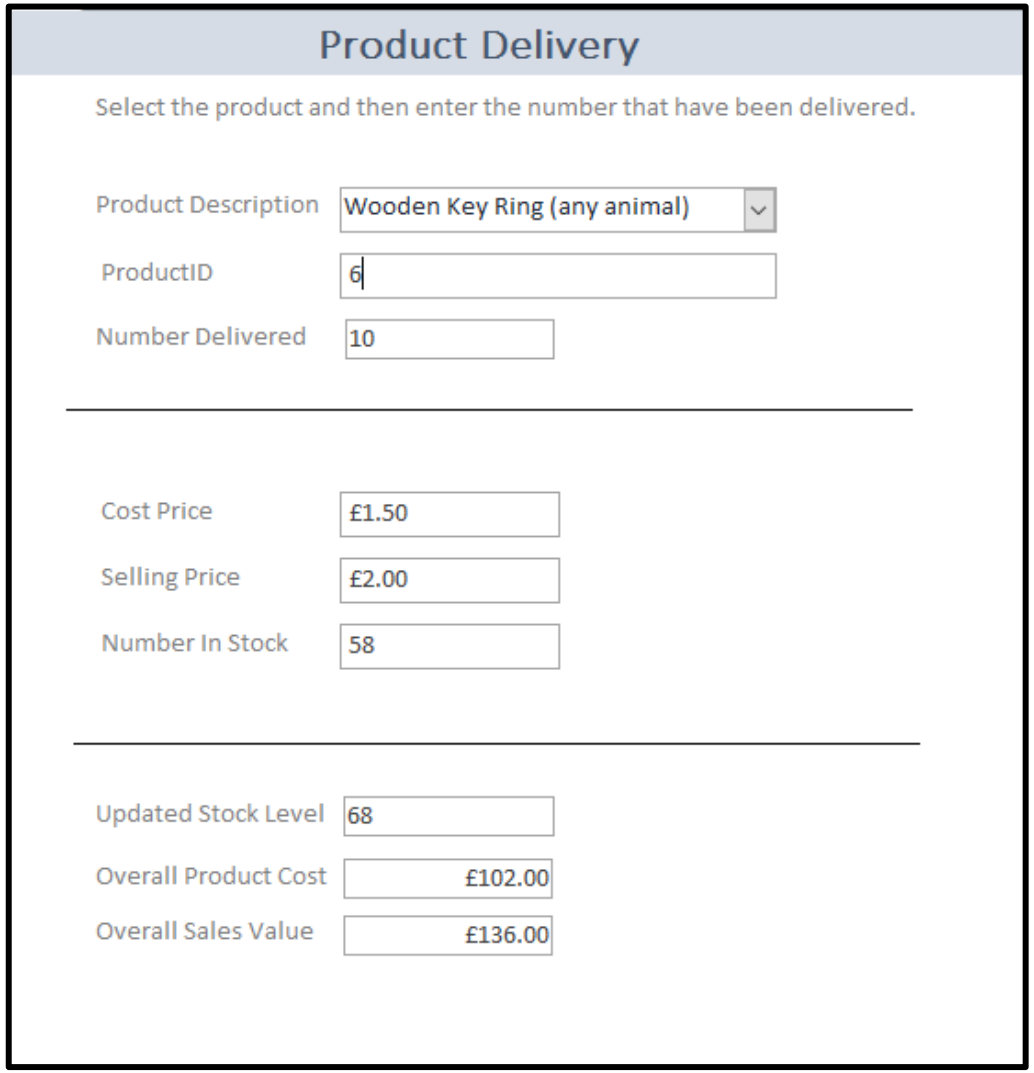


Activity 7: Interface Testing (20 minutes) – 6 marks

Test the interface of your relational database using suitable test data (normal, erroneous
and extreme as appropriate).

You must not add validation to any of the tables.

Activity 7: Interface Testing (20 minutes) – 6 marks

You must provide evidence of **form level** testing that proves:

1. The supplier form is ready for data entry when the form opens
2. The delivery days cannot be above the top of the range
3. The delivery days cannot be below the bottom of the range
4. A record will save in the supplier table if the supplier details are present and valid
5. After the product has been selected and the number delivered input these details should be displayed:
    - cost price
    - selling price
    - current number in stock
6. After the product has been selected and the number delivered input these details should be calculated and displayed:
    - the new number in stock
    - the overall cost for the products in stock
    - the overall sales value for the products in stock.

Activity 7: Interface Testing (20 minutes) – 6 marks

Complete the test log to show how you have tested your input forms using the given **activity7.rtf** template.

Testing document for use with Activity 7
Type of Test (N = Normal, R=Erroneous, X=Extreme)

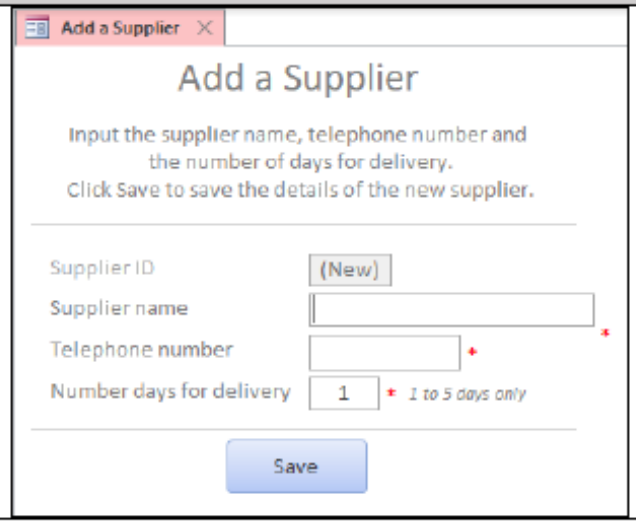
Ensure screenprint evidence is included of all tests and that the screenprints are readable and referenced to the test. If the actual results column is not wide enough to clearly show the results include them underneath the table clearly references to the test

Interface testing

Do not carry out any testing other than that specified in the activity
Delete rows as required

Test No	Type of test (N, R, X)	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)	Only complete this column if the results are not as expected Explain the error If you correct the error explain how you have done it including screenprint(s)

Activity 7: Interface Testing (20 minutes) – marks

Test No	*type test*	*Add suitable test data*	*Add the results you would expect to get from a fully working system*	*Add screenprint(s) of the results of this test carried out on your database. Ensure you show the test data used in the screenprint(s)*	*Only complete this column if the results are not as expected* • *Explain the error* *If you correct the error explain how you have done it including a screenprint*
1	N	Open form	Form to open at a new record. Number days for delivery to default to 1		

Activity 8: Interface Evaluation (20 minutes) – 6 marks

You should consider the quality, performance and usability of the interface you have created in terms of how well it ensures:

Supplier form

- The supplier form is ready for data entry when the form opens
  - the delivery days cannot be above the top of the range
  - the delivery days cannot be below the bottom of the range
  - a record will save in the supplier table if the supplier details are present and valid

Activity 8: Interface Evaluation (20 minutes) – 6 marks

You should consider the quality, performance and usability of the interface you have created in terms of how well it ensures:

Product delivery form

- After the product has been selected and the number delivered input these details should be displayed:
  - cost price
  - selling price
  - current number in stock
  - after the product has been selected and the number delivered input these details should be calculated and displayed:
  - the new number in stock
  - the overall cost for the products in stock
  - the overall sales value for the products in stock.

BTEC Command Verbs

Pass

Describe	Give a clear description that includes all the relevant features – think of it as 'painting a picture with words'.
Define	Clearly explain what a particular term means and give an example, if appropriate, to show what you mean.
Design	Create a plan, proposal or outline to illustrate a straightforward concept or idea.
Explain	Set out in detail the meaning of something, with reasons. More difficult than describe or list, so it can help to give an example to show what you mean. Start by introducing the topic then give the 'how or 'why.
Identify	Point out or choose the right one or give a list of the main features.
Illustrate	Include examples or a diagram to show what you mean.
Interpret	Define or explain the meaning of something.
List	Provide the information in a list, rather than in continuous writing.
Outline	Write a clear description but not a detailed one.
Plan	Work out and plan how you would carry out a task or activity.
State	Write a clear and full account.
Summarise	Write down or articulate briefly the main points or essential features.

Merit

Analyse	Identify separate factors, say how they are related and how each one contributes to the topic.
Assess	Give careful consideration to all the factors or events that apply and identify which are the most important or relevant.
Compare/ Contrast	Identify the main factors that apply in two or more situations and explain the similarities and differences or advantages and disadvantages.
Demonstrate	Provide several relevant examples or related evidence which clearly support the arguments you are making. This may include showing practical skills.
Design	Create a plan, proposal or outline to illustrate a relatively complex concept or idea.
Explain in detail	Provide details and give reasons and/or evidence to clearly support the argument you are making.
Justify how/why	Give reasons or evidence to support your opinion or view to show how you arrived at these conclusions.

Distinction

Appraise	Consider the positive and negative points and give a reasoned judgement
Assess	Make a judgement on the importance of something – similar to evaluate.
Comment	Give your view after you have considered all the evidence. In particular critically decide the importance of all the relevant positive and negative aspects.
Criticise	Review a topic or issue objectively and weigh up both positive and negative points before making a decision.
Draw conclusions	Use the evidence you have provided to reach a reasoned judgement.
Evaluate	Review the information then bring it together to form a conclusion. Give evidence for each of you views or statements.
Evaluate critically	Decide the degree to which a statement is true or the importance or value of something by reviewing the information. Include precise and detailed information and assess possible alternatives, bearing in mind their strengths and weaknesses if they were applied instead.

Evaluation skills

- Spend 20 minutes on an evaluation
- Remember to use evaluative terms – not descriptive
- Don’t use the terms ‘I did …..’, but rather start each sentence with things like:

‘the reason I did this was because …..’

‘if I hadn’t have done it that way then the result would have been ……’

Remember you must:
- Weigh up pros and cons
- Compare and contrast
- Use as many technical terms as you possibly can (entity relationship, one-to-many, data integrity, enforce referential integrity, etc.)